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Economische gevolgen van ontwapening

Duisenberg, Willem Frederik

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Wij menen, dat de hiervoor beschreven ervaringen door de volkomen andere omstandigheden waarin een toekomstige, wereldomvattende ontwapening zich zou voltrekken, onvoldoende houvast bieden om er in het vervolg van dit boek op terug te komen. „Het lijkt derhalve duidelijk, dat de naoorlogse ervaring slechts weinig onmiddellijke toepasselijkheid heeft voor de tegenwoordige omstandigheden”¹. In de volgende hoofdstukken zal men dan ook geen referenties aan de hier genoemde ervaringen meer aantreffen. Alvorens die hoofdstukken echter aanvangen, volgt in de volgende paragraaf eerst hun samenvatting.

Par. 4. Samenvatting van de gehele studie

4.1. Economie en ontwapening

Ontwapening betekent in deze studie de algehele, snelle afschaffing van alle militaire maatregelen in alle landen. Het negeren van de politieke waarschijnlijkheden – die veeleer wijzen op een zeer geleidelijke afschaffing van slechts enkele, zij het belangrijke onderdelen van de moderne bewapening – wordt gedaan omdat aldus de economische consequenties van de ontwapening het duidelijkst kenbaar worden.

De vage ongerustheid over nadelige economische gevolgen van ontwapening, die van tijd tot tijd in de pers tot uiting komt, gaat wellicht niet over, maar kan minder vaag worden als men er zich reken-schap van geeft welke die gevolgen dan zullen zijn en hoe er iets aan gedaan kan worden.

4.2. Algemene gevolgen van ontwapening op korte termijn

Een beschouwing over gevolgen van ontwapening op korte termijn betekent het analyseren van de gevolgen bij een gegeven capaciteit en samenstelling van het nationale productieapparaat. Het verdwijnen van de defensiebegroting in alle landen leidt tot – althans gedeeltelijk – wegvallen van personeelsuitgaven en van aankopen bij binnen- en buitenlandse bedrijven, alsmede tot het vrijkomen van personeel. De verminderde overheidsbestedingen zullen een deflatore invloed op het nationale inkomen hebben, waarvan de hevigheid wordt bepaald door

¹ The Economist Intelligence Unit, *Economic Effects...*, p. 125.

zonder militaire bijdrage tot stand gebracht, zodat het wegvallen van deze bijdrage van geen betekenis zal zijn.

Een poging tot kwantificering van de invloed van ontwapening op de groei naar een voorbeeld van Leontief leidde tot een verhoging van de procentuele jaarlijkse aangroeiing van het bruto binnenlandse produkt van 4,4% thans tot 4,6% na ontwapening. Dit resultaat moet niet worden opgevat als een nauwkeurige voorspelling van wat er zal gebeuren, maar meer als een indicatie, dat de invloed van ontwapening op de Nederlandse economische groei hoogst waarschijnlijk niet negatief zal zijn.

4.14. Gevolgen van ontwapening voor de Rijksdelen op het Westelijk Halfrond

De economische structuur van Suriname en de Nederlandse Antillen – met name Curaçao en Aruba – is eenzijdig beïnvloed door resp. de grote betekenis van de uitvoer van bauxiet en de raffinage van aardolie.

Zowel voor de vraag naar bauxiet als naar olieprodukten is de militaire sector in de wereld van belangrijke betekenis. Dit impliceert, dat deze landen, wat de gevolgen van ontwapening betreft, afhankelijk zullen zijn van het succes waarmee in de afzetgebieden het militaire verbruik zal kunnen worden vervangen door civiele aanwending. Een schatting van de Verenigde Naties leert, dat bij aanwending van alle militaire uitgaven voor burgerlijke doeleinden de vraag naar bauxiet en olie iets, zij het zeer weinig, zal teruglopen. Het is de vraag of deze lichte teruggang gelijkmatig over de producerende landen gespreid zal zijn.

De eigen militaire inspanning van Suriname en de Antillen kan worden verwaarloosd; het vertrek van Nederlandse militairen zal tot een lichte bestedingsvermindering aanleiding kunnen geven, maar dit vraagstuk kan, daar hun aantal gering is, eveneens van weinig betekenis worden geacht tegen de achtergrond van de mogelijke gevolgen via de de vraag naar bauxiet en olie.

Als conclusie voor de Rijksdelen in de West komen wij tot de waarschijnlijkheid van het ontbreken van een positieve invloed op de economische groei, terwijl een geringe vertraging niet uitgesloten kan worden geacht.

Par. 5. Conclusies

De uiteenlopende betekenis van de defensiesector in de verschillende

landen leidt tot de noodzaak van een genuanceerd oordeel over de mogelijke gevolgen van algehele, snelle ontwapening.

Voor de grote landen in de westerse wereld en in het bijzonder voor de Verenigde Staten betekent ontwapening een zodanige ingreep in het economische leven, dat krachtige en tijdig voorbereide tegenmaatregelen geboden zijn, terwijl ook economische argumenten kunnen worden aangevoerd voor een zekere geleidelijkheid in het ontwapeningsproces. Voor de Verenigde Staten en wellicht ook voor het Verenigd Koninkrijk, landen waar de economische groei reeds thans aan de trage kant wordt geacht, kan van ontwapening geen versnelling van die groei worden verwacht; een negatieve invloed is niet uitgesloten.

De overige landen in het westen zullen in het algemeen van ontwapening geen nadelige gevolgen hoeven te ondervinden.

De afwezigheid van nadelige gevolgen, en dit geldt voor alle landen, betekent in feite vooruitgang, daar men kan aannemen, dat de behoefte aan veiligheid ook na ontwapening voldoende bevredigd blijft (anders zou men niet tot ontwapening hebben besloten!), terwijl de vrijkomende produktiefactoren voor andere doeleinden kunnen worden aangewend.

Ook de communistisch geregeerde landen zullen door ontwapening tot een gewijzigde economische structuur worden gedwongen. Volledige werkgelegenheid en de centrale leiding van het produktieproces kunnen deze overgang vergemakkelijken. In de Sovjet-Unie heeft de militaire sector een relatieve betekenis die bijna vergelijkbaar is met die in de Verenigde Staten; ook voor de Sovjet-Unie kan op economische gronden een spreiding van de ontwapeningsprocedure in de tijd de omschakelingsmoeilijkheden verzachten.

De ontwikkelingslanden zullen de ontwapening vooral bemerken via de afzet van grondstoffen aan de geïndustrialiseerde wereld. Zij zijn daarmee afhankelijk van het succes waarmee hun afnemers de gevolgen van ontwapening weten te pareren. Over de economische hulp aan ontwikkelingslanden na ontwapening zijn wel wenselijkheden maar geen waarschijnlijkheden uit te spreken.

Ontwapening, ten slotte, zal een aantal landen voor aanzienlijke economische vraagstukken plaatsen. Zij zijn echter niet onoplosbaar, noch onoverkomelijk, mits de overheid in de betrokken landen bereid is tot tijdige en voldoende tegenactie; tijdig niet alleen wat betreft de uitvoering, maar zeker ook met betrekking tot de voorbereiding.

SUMMARY¹

1. Economics and Disarmament

In this study disarmament means the total and quick abolition of all military measures in all countries. The political probabilities – which point to a smooth abolition of only a few important parts of modern armament – are ignored, because in this way the economic consequences of disarmament become most clear.

The vague uneasiness about detrimental economic consequences that finds expression from time to time in the press, will perhaps not disappear but may become less vague if one forms an idea about those consequences and about the measures that can be taken to meet them. However, determining the consequences and the possible counter-measures can not be done with great precision. Disarmament can be realized in so many ways and its economic consequences can be compensated with such an endless variety of countermeasures, that it is necessary to make many simplifying assumptions. Of course the conclusions will only be valid with regard to these assumptions.

The experience with disarmament in the past – after the second world war and the Korean war – will be ignored because this experience is not considered relevant for the assumption of total, quick disarmament in the contemporary world economy.

2. General Short-term Consequences of Disarmament

An analysis of the short-term consequences of disarmament in any country implies the assumption of a fixed capacity and composition of the amount and quality of the national productive capacity. The disappearance of defense efforts in all countries leads to the partial cancellation of personnel expenditures, purchases from national and foreign firms and the release of personnel. The reduced government

¹ I am very much indebted to H. G. Werkema, Ph. D., Univ. of Groningen, and F. Pryor, Ph. D., Yale Univ. for their comments on my use of the English language. The numbers of the sections of this summary correspond with the numbers of the various chapters.

expenditures will exert a deflationary pressure on the national income, the extent of which will depend on the size of the multiplier. This may cause some unemployment, that has to be added to the already enlarged supply of labor caused by the release of defense personnel.

Now it is obvious that any government will want to combat the described detrimental consequences. This can be done by using the released defense outlays for other than military objectives, or by making them disposable to the 'public' by means of tax reduction. In the latter case the public provides the desired counterpressure by increased consumption and investment. Generally the amount spent on compensating measures will not directly depend upon the amount of money saved by disarmament, but, rather, on the ends of economic policy, e.g. the maintenance of full employment.

If military demand is substituted by civil demand, the structure of the national productive potential will have to change. Given the kind of disarmament and of the countermeasures, this change can be ascertained with the use of input-output analysis. This analysis will disclose the changes in demand that can be expected for the various industries.

These changes also depend on the kind of compensating government policy. In the theoretical case of a completely free market economy, tax reduction is the most obvious alternative to defense outlays. But the reduction of different taxes has different influences on effective demand. In the totally controlled economy the government will want to maintain complete control over the compensating measures by fixing the amount as well as the direction of the expenditures. In the western world probably a mixture of these possibilities would be applied; in the communist world, for the greatest part centrally planned economies, the latter possibility would be realized.

Disarmament may have two kinds of regional effects: the defense contractors may not be evenly distributed over the country and the same may hold true for the defense personnel, that is released. A regionally different effect of disarmament *may* induce a regionally differentiated government intervention. This depends also on the objectives of economic policy and the degree of government intervention which is customary in the country.

3. Some Theoretical Considerations on the Long-term Consequences of Disarmament

The impact of disarmament on economic growth can be determined by tracing the factors that determine growth and the extent to which they do so after the transition to a world without a defense sector. In this study the growth factors were traced in two ways: by using the macro-economic data for the economic process of Eucken and with the help of a mathematical model of economic growth built by Solow.

The institutional framework and the preference functions will – at least in our opinion – not be affected by disarmament.

The factors that accomplish the growth phenomenon – active growth factors – are the quantity and the quality of the three factors of production (labor, capital and land) and the technical knowledge which determines the ways in which these productive factors can be combined, given the institutional framework and the preference functions of individuals, groups and the government.

The released military personnel and the people who worked on defense contracts in individual firms, can now be included in the labor force available for civil production. This may mean a once and for all increase in the economically active population which may also induce a single positive shift in the *level* of growth of the national product. The *rate* of growth however will not change. This would only be the case if, as a consequence of disarmament, the rate of increase of the economically active population would change. There is no reason to expect this. The possibility described here will only be realized if the supply of labor constituted a bottle-neck to economic growth before disarmament. This is not the case in all countries.

The quality of the supply of labor may also be affected by disarmament. Especially in developing countries it is possible that this influence constitutes an amelioration of that quality. If so, an acceleration of economic growth becomes possible.

The disarmament impact on the formation of capital is very uncertain, because this is highly dependent on the compensating measures taken by the government. It is possible, for instance, that the entire defense budget would be used for public investments, or, alternatively that a reduction of taxes is effectuated. In the latter case one can imagine a positive influence on private investments but it remains an

open question whether this positive influence will be equal to the negative effect of the cancellation of defense expenditures.

Still another effect of disarmament on growth via the stock of capital may be a change in the capital-output ratio; this can be the case in countries with a highly specialized armaments industry which has little 'kinship' to the civilian industries.

The soil, in the sense of surface, practically never constitutes a bottle-neck for growth; but this is not true for the natural resources (which, in economics, are included in the productive factor land). On the one hand, the ceasing of use of natural resources by the military sector offers greater possibilities to the civilian sector. On the other hand, however, this may endanger the economic growth of countries whose income is highly dependent on the demand for these resources, namely in the case that the military demand is not entirely substituted by civil demand.

The development of technical knowledge is also a determinant of the economic rate of growth. In as far as this technical development depends on research in the military sector, it may be threatened by disarmament if the civil sector would not take over this task. There are countries where the military sector finances such an overwhelming part of the research and development outlays, that a slowdown in the growth of technology does not seem to be an impossibility.

In countries, where military and military induced imports and exports about balance each other, disarmament will not have a unilateral effect on the balance of payments on current account. If, however, this balance is lacking, in other words, if as a consequence of disarmament either imports or the exports should experience a relative decline, this will influence economic growth. This influence is rather complicated: for instance, declining exports mean that more resources are left for national use; but, at the same time, these declining exports may endanger the imports, which may be necessary for the procurement of the resources for the national production.

Economic growth is determined by the simultaneous impact of a multitude of factors. Disarmament influences many of these factors. In general the influence on economic growth depends on the circumstance whether the factors constituted bottle-necks for growth. This will be different in every country, dependent on the structure of the economy as well as the kind and extent of the armament efforts.

4. Impact of the Kind of Defense Effort

Although practically every country in the world has a defense sector, there are wide differences in the structure of that sector among the countries. Thus there are countries with relatively labor-intensive armies (e.g. the developing countries) and countries where the army is relatively capital-intensive (e.g. the United States). The consequences of disarmament will be different according to the structure of the defense sector. Theoretically one can imagine six special cases, none of which will be found in reality, but which give us an impression of the disarmament impacts and, consequently, of the compensating measures to be taken.

i. When the military sector consists only of people – with no weapons – disarmament in the first place increases the supply of labor. This may result in unemployment, which depends on the cyclical and structural situation in the period of disarmament and on the degree of success of the actual government measures. Furthermore, disarmament has an immediate impact on effective demand via expenditures. The decrease in spendings depends on the indemnification payments to the former military personnel and the expenditure policy of the government.

ii. The military sector can also exist only of machines produced within the country (e.g. rockets). Disarmament now means the exertion of deflationary pressures through the diminishing demand for the products of certain firms. These pressures may subsequently spread over the entire economy. Governmental compensating measures leading to increased civil demand will not generally be able to rescue the firms that have specialized in the production of modern weapon systems.

iii. Next it is possible that the defense effort only consists of the import of weapons. If these weapons were granted by foreign governments, there is no influence on the national economy. If the imports had to be paid for, disarmament will release foreign currency reserves. These can now be used for civil purposes, which may positively affect economic development.

iv. Was the country only exporting weapons, then disarmament has the same deflationary effect as in case ii. If these weapons were granted to foreign governments, then disarmament would also make financial means available for countermeasures. In the other case disarmament in addition creates a deterioration of the balance-of-

payments, which in itself may also require corrective measures in a deflationary direction.

v. The 'import' of people (e.g. mercenary troops) will cause re-exportation of these people so that there is no influence on the labor market. But their expenditures will cease with this withdrawal. If the troops were paid by the importing country, no problems arise. If the foreign soldiers were financed by a foreign government, the national government should compensate the decrease in expenditures with its own means, whether by withdrawing them from other uses or, depending on the cyclical situation, by creating new means.

vi. If the defense effort consisted of the export of people, their repatriation creates a problem on the labor market, which can be solved easier if the exportation was financed by the exporting country. Besides, the balance-of-payments is affected favorably. In the contrary case the financial means for compensating measures, like in case v, are to be withdrawn from other uses or are to be newly created.

5. Some Remarks on Communist Theories Concerning Armament and Disarmament

Do communists think that capitalist economies cannot bear disarmament? In the western world this opinion is often attributed to communists, but in communist literature it is denied. However, the western opinion is understandable, when communist authors are studied, at least until very recently.

First, in the opinion of many communist authors one of the fundamental characters of capitalism is imperialism, the pursuit of command over other countries, whether or not capitalist. This is thought a consequence of the competition between the large monopolies and leads to war. Thus armament is necessary and, consequently, disarmament in communist doctrine cannot be considered compatible with the imperialistic character of the capitalist countries.

Second, the continuance of full employment and full capacity in the western countries is, among other factors, attributed to the unbridled armsrace, even in the sense that the increasing military efforts are considered a deliberately used means to avoid crisis.

Because of these two reasons I consider the existence of the western opinion explicable that communists should think that disarmament would ring in the final crisis of capitalism.

The position can be defended that the western world now should reconsider its opinions, because in recent communist literature it is explicitly recognized that disarmament will not cause unsurmountable difficulties for the capitalist system.

6. *Armament and World Economy*

Estimates on the total amount of dollars spent annually for defense purposes in the world vary from \$ 90 to \$ 180 billion. On the average the defense sector offers a yearly employment to 50 million men.

The defense outlays in the world are for the greatest part spent by relatively few countries (Table vi.1). The U.S. provide about one half of the total amount; according to official statistics the U.S.S.R. provides some 11%, but this percentage would probably be somewhat higher if defense expenditures were classified similar to the methods used in e.g. the U.S.

The countries with the largest defense expenditures relatively also bear the heaviest burden, if one takes as a measure for this burden the percentage of defense-expenditures to gross national product (Table vi.2). For developing countries this percentage is rather small (about 2%), with the exception of the Asian countries, where the burden is some 4%.

In the following three sections the disarmament impacts on the western, the communist and the development countries are successively examined.

7. *The Western Countries*

This group – the non-communist, industrialized countries – is in our study treated in three sub-groups: the United States, the other big countries (the United Kingdom, Canada, the Federal Republic of Germany and France) and, finally, the relatively small countries.

The United States have absolutely as well as relatively the largest defense expenditures; besides, this country shows the highest degree of mechanization of the defense sector. Because of a rather high rate of unemployment, a quick abolition of the relatively important defense sector will be rather difficult to meet. Smoothing the disarmament process over time seems desirable for the U.S., among other also for economic reasons. The diminishing necessity of military aid to other countries may cause relief for the American balance-of-payments. However, it is impossible to predict to what extent military aid will be substituted by economic aid, in other words, to what extent the arms-race will be replaced by an aid-race.

The industries that receive the largest part of the defense con-

tracts are the aircraft industry and the electronics and electrical engineering industries. Apart from these the ordnance industry and the shipbuilding sector also depend for more than a third of their activities on defense contracts (Tables VII.2 and VII.3).

The regional distribution of defense-induced employment is rather uneven; two States owe more than 25% of their industrial employment to the defense sector (Table VII.4).

In the long run the release of some 2.5 million soldiers offers possibilities for enhanced growth, but it is doubtful whether these possibilities will be used, because of the existing structural unemployment. More than one half of the research and development outlays stem from military efforts. It is impossible to predict whether the total outlays for this purpose will be maintained after the cancellation of the military contribution. It is also impossible to say whether this matters, because the significance of military research and development for economic growth is unmeasurable. If one accepts the total amount of money spent for research and development as a measure for the development of technical knowledge and assumes that disarmament will cause a decrease of this amount, then technical development and economic growth may be retarded.

In the other big countries (United Kingdom, Canada, Western Germany and France) the relative significance of the defense sector is 5 to 7% of gross national product, against almost 10% in the U.S.A. (Table VII.5). With the exception of Germany these countries produce the largest part of the products for military purposes themselves (for Canada cf. Table VII.6). For these countries disarmament will mean a rather radical operation, but especially in Western Germany and France the existing rapid economic development with enduring full employment may make it easier to solve the problems. The release of labor and other factors may give these countries the possibility to reach a higher level of economic growth. In the United Kingdom, where the economy is already stagnant for some time and in Canada, where growth is accompanied by a rather high degree of unemployment, one may expect more difficulties in compensating the consequences of disarmament. The technological development in these countries, except Canada, depends heavily on military financial means, so that also in these countries a retardation in this respect is more likely than an acceleration.

If the governments in the smaller countries are in time with the

design of countermeasures to cope with the consequences of disarmament, they should be able to meet disarmament without great difficulties. In these countries the defense sector is relatively less important and they have a technically less specialized defense-industry, whereas the release of military and other personnel in most countries means a welcome relief of the labor market.

So we see that the probability of detrimental consequences gets smaller for smaller countries. The largest countries will have to solve the relatively largest problems. Because these problems can be solved easier when disarmament does not happen in one blow but occurs more slowly over a long period, the already small problems of the small countries become still smaller. This conclusion holds only if the disarmament impacts on big countries do not affect the balance-of-payments of small countries unfavorably.

8. Communist Countries

Generally speaking, the military efforts of the communist countries are slightly more labor-intensive than of the western countries. Although one should be very careful in making comparisons because of the uncertainty with regard to the officially published data, one might say, that the significance of the defense sector within communist economies is roughly similar to that in the non-communist industrialized countries. The Soviet Union is comparable to the United States; the other communist countries to the other western countries.

The consequences of disarmament in communist countries are in general also the same as in the western countries, namely, the decrease of the need for goods for military purposes and the consequent necessity of conversion to other kinds of production. In this conversion process most communist countries have the advantage of an almost continuous full employment and further – and this is an important difference with regard to western countries – they have considerable experience in revising their national plans, which regulate the volume and composition of the national product. The problems connected with disarmament are not fundamentally different from these revisions.

The communist countries themselves expect disarmament to enhance international trade, especially between communist and non-communist countries.

The disappearance of military and military induced employment

offers the possibility of increased economic growth, whereas little can be said about the outlays for research and development, that are also centrally planned. With a little more justification than in the western world one could suppose that the amount of research and development expenditures will not be affected by disarmament, but that they will entirely be directed towards civil uses, so that a more directly accelerating influence on economic growth might be expected.

9. Developing Countries

In the developing countries the defense sector has a relatively smaller significance for the economy than in the already industrialized countries. The first consequence of the abolition of the defense sector is the deflationary influence of diminished military spendings, which, however, can be compensated by expenditures in the civilian sector. Furthermore, there is a diminishing necessity to import military goods. This creates the possibility to use the available foreign reserves for purposes with a greater significance for the economic development. Finally, military personnel are released. However the resulting increase of the supply of labor in most cases does not remove a bottle-neck for growth; only the possibility that the released soldiers have a positive effect on the quality of labor may have a positive influence on economic growth.

It is likely, however, that the most important problem for the development countries is the influence of disarmament on their relations with the industrialized countries. Developing countries have generally specialized in the production of raw materials. For many developing countries exports consist of only one or a very few raw materials of agrarian or mineral origin (Tables IX.1, IX.2 and IX.6). In as far as these raw materials are used in industrialized countries for military ends, it is immediately clear that the sales of developing countries are strongly dependent on the extent to which the industrialized countries succeed in substituting military demand by civilian demand. The expectations in this respect are rather reassuring, but many conditions have to be fulfilled for their realization (Table IX.7). Moreover, not only the raw materials with direct military applications depend on the demand from industrialized countries. The same is true for all other raw materials with the result that the future of developing countries depends on the success of the governments of industrialized

countries in taking countermeasures against the deflationary influences of disarmament. What will happen with economic aid to development countries in a world that decides to disarm, is unpredictable.

It is likely that in the developing economies the reaction of a deflationary impulse will be more violent than in industrialized countries. No clear positive influence on economic growth can be indicated. We conclude that the consequences of disarmament for development countries are not favorable. This does not necessarily mean that they will be unfavorable, but this possibility should not be excluded.

10. Relative Significance of the Defense Sector in The Netherlands

In The Netherlands defense outlays are some 4% of gross national product. About 18% of government expenditures are for military purposes (Table x.1). About one half of the defense outlays involve personnel expenditures (Table x.2). Military exports are c. 1% of total exports; the corresponding percentage of the imports is about 2% (Table x.3).

The defense sector directly offers employment to c. 157.000 men; c. 126.000 of them are soldiers.

We assume that after disarmament about 75% of the total defense expenditures could vanish. What remains is necessary for the payment of pensions and indemnifications to a part of the released defense personnel and for the continuation of some tasks, which are now done by the military sector (e.g. the Topographic Agency), but which are also necessary in a disarmed world. We assume that of the 157.000 defense-employees about 15.000 will not try to find another job on account of their age; consequently, the supply of labor will increase by some 142.000 former members of the defense personnel.

11. Short-term Consequences of Disarmament in The Netherlands

The Dutch Central Planning Bureau has calculated what the short-term consequences of disarmament in The Netherlands would be, on the basis of our assumptions. In 1960 general and complete disarmament would have meant a decrease of personnel expenditures of 500 million guilders and of material outlays of 800 million guilders. As a consequence of diminished spendings the national product (total of added values) would have been 2.2% lower in that year; imports, 2.1%

and employment, 5.4% (the released defense personnel included). The industries affected most by disarmament would have been the metal industry, chemical industry, transports and public utilities (Table XI.1).

Next we assumed that the Dutch government would have taken a number of compensating measures, consisting of reduced taxes (700 mln. gld.), additional government expenditures for civil purposes (400 mln. gld.) and an increase in exports in the form of tied aid to development countries (200 mln. gld.). The total is chosen so that the government budget remains in equilibrium, but this is by no means necessary; stronger as well as weaker compensating measures might be taken, depending on the objectives of economic policy.

As a result of these countermeasures – without disarmament – in 1960 the total of added values would have been 2.0% higher than it actually was; imports, 1.9%; and there would have been an increase in demand for labor of 2.0%. Under our assumptions the construction industry would have been strongly stimulated (Table XI.2).

Disarmament and compensating measures together would have caused a decrease of the national product of 0.3%; if the government sector is excluded, even an increase of 1.3% would have resulted. The four industries mentioned above also show a slight decrease of activities when the compensating measures are taken into consideration. All other industries show an increase, which under our assumptions is strongest in the construction industry. As compared with the changes in national production in the last years, the consequences of disarmament are negligible. The same is true for the balance of payments (Table XI.3).

On the labor market the final result is an increase of the supply of labor of 99,000 men. It depends on the cyclical situation in the period of disarmament whether the increased supply of labor would mean an increase of unemployment.

The regional distribution of military efforts in The Netherlands is classified. We have the impression that the regional distribution of firms with defense contracts does not differ from the geographical distribution of the Dutch population. One can make an exception for the construction industry: many small firms are concentrated in the *neighbourhood of large garrisons in the middle and, somewhat less, in the south of The Netherlands.*

12. Disarmament and the Firm

I undertook an inquiry under Dutch defense contractors, in order to investigate the relative significance of defense contracts for total sales and the extent to which disarmament was taken into consideration in the planning of the managers of the firm. The inquiry is comparable to the English inquiry by the Economist Intelligence Unit in 1961 (Table XII.2).

More than half of the Dutch defense contractors appeared to be dependent on defense contracts for less than a quarter of their sales. The 16% of the firms that owe more than 75% of sales to defense contracts, were largely firms which were economically directed towards defense, but whose products could immediately be sold in the civil market (especially construction) (Table XII.3).

Most firms, which are strongly dependent on defense contracts, are small in size. It seems safe to say that, contrary to the U.K., The Netherlands does not have a technically highly specialized defense industry (Table XII.4).

From the answers to a question concerning the attention paid to the possibility of disarmament and its consequences for the individual firm, it appeared that this possibility was not even considered by the overwhelming part of the firms. It was not possible to state a relation between the degree of dependency of defense contracts and the attention paid to the eventual consequences of disarmament. This phenomenon, which has also been observed in the U.S.A., seems explicable as well as harmless because of the rather insignificant role of the defense sector in Dutch business (Table XII.5).

13. Long-term Consequences of Disarmament in The Netherlands

The most important consequence for economic growth in The Netherlands is the release of defense personnel. In the Dutch economy after the Second World War there has been full employment with hardly any interruptions and in recent years even over-full employment. Consequently, one may assume that the former defense personnel will easily find other jobs, this offers possibilities for an increase of economic growth.

It is impossible to predict the disarmament impacts on the formation of capital, as these will mainly depend on the government

expenditure policy. We have already indicated that the Dutch economy has no technically strongly specialized industries for defense contracts; thus it seems safe to assume, that the capital-output ratio will not change significantly as a consequence of disarmament.

Technical development in the Netherlands presently takes place without a significant contribution of the military sector; the abolition of this contribution will have no effects on economic growth (Table XIII.1).

An attempt to calculate the growth effects of disarmament in The Netherlands with the help of a Leontief model, resulted in an increase of the yearly percentage growth rate of the gross domestic product from 4.4% to 4.6%. This result should not be interpreted as an exact prediction of what is likely to happen, but as an indication that the effects of disarmament on economic growth will probably be non-negative.

14. Consequences of Disarmament for the Parts of the Kingdom of The Netherlands in the Western Hemisphere

The economic structure of Surinam and the Netherlands Antilles – especially Curaçao and Aruba – is very one-sided as a consequence of the great significance of the exportation of bauxite and of the oil-refining-industry.

The military demand in the world for bauxite as well as for oil-products is rather important. This means that these countries will be dependent on the success in the countries that import their products for substituting military consumption with civil applications. A U.N.-estimate shows that, under the assumption that all military funds will be used for civil purposes, the demand for bauxite and oil-products will decrease a little. It is an open question whether these decreases will be evenly spread over the producing countries.

The military efforts of Surinam and the Antilles are negligible; the departure of Dutch soldiers may have a slight deflationary effect, but this too can be considered negligible because of their small number, in comparison with the possible consequences via bauxite and oil exports.

We conclude that there is a strong probability of no positive influence on economic development, while a slight retardation of this development is not impossible.

15. Conclusions

The differing significance of the defense sector in different countries necessitates a shaded conclusion as to the possible consequences of general and complete disarmament.

For the large countries in the western world, especially for the United States, disarmament implies such a radical change of economic life, that strong compensating measures, taken in time, are necessary. Also on economic grounds one can plead for a rather smooth period of transition. For the United States and perhaps also for the United Kingdom – countries where presently economic growth is already considered to be rather slow – it is unlikely that disarmament will imply an acceleration of growth; a negative influence is more likely.

The other countries in the western world in general need not expect harmful consequences of disarmament.

The absence of detrimental consequences, and this is true for all countries, in fact means progress, because one may assume that the need for security after disarmament also will be satisfied – otherwise one would not have decided to disarm – whereas the released factors of production now can be used for other purposes.

The communist countries will also be forced into a different economic structure by disarmament. Full employment and the central planning of the production process may help to bring about the transition. In the Soviet-Union the defense sector has a significance that is approximately comparable to that of the United States; for the Soviet-Union a distribution of disarmament procedures over time may also help to overcome the difficulties of the conversion to peacetime production.

The developing countries will especially be affected by disarmament via their exports of raw materials to the industrialized countries. Therefore they are dependent on the success of the industrialized countries to cope with disarmament. Thoughts on the consequences of disarmament for the economic aid to development countries can necessarily only be speculative.

Disarmament, finally, will cause considerable economic problems for some countries. However, these problems are neither unsolvable, nor unsurmountable, provided the governments in these countries are prepared to take enough compensating measures in time. Timely preparation is a *sine qua non* for timely execution.